

In The Claims:

1. (Currently Amended) A connector assembly for a circuit board comprising:

a flex circuit;

a back shell having guide channels disposed within a first outside surface therein, said back shell coupled to the flex circuit; and

a housing having longitudinal sides and lateral sides defining an outer perimeter of the housing, said housing having guide arms extending from a second outside surface the longitudinal sides outward from the circuit board, said guide arms sized to be received within said guide channel channels to align the back shell and housing during assembly.

2. (Original) A connector assembly as recited in claim 1 wherein said back shell comprises retraction feature disposed thereon.

3. (Original) A connector assembly as recited in claim 2 wherein said retraction feature is integrally molded with said back shell.

4. (Original) A connector assembly as recited in claim 2 wherein said retraction feature comprises a partial cup shape.

5. (Original) A connector assembly as recited in claim 1 further comprising a first carrier board fixedly coupled to the circuit board, a second carrier board fixedly coupled to the circuit board.

6. (Original) A connector assembly as recited in claim 5 further comprising a third carrier board and a fourth carrier board fixedly coupled to the back shell.

7. (Currently Amended) A connector assembly as recited in claim 6 wherein said third carrier board is coupled to ~~[[a]]~~ the flex circuit.

8. (Original) A connector assembly as recited in claim 6 further comprising a first interposer electrically coupling said first carrier board and said third carrier board, and a second interposer electrically coupling said second carrier board and said fourth carrier board.

9. (Original) A connector assembly as recited in claim 8 wherein said first carrier board, said second carrier board, said third carrier board, said fourth carrier board, said first interposer and said second interposer are positioned within said housing when assembled.

10. (Original) A connector assembly as recited in claim 9 wherein said back shell forms a dust shield.

11. (Original) A connector assembly as recited in claim 8 wherein said housing comprises ribs therein, said ribs aligning said first interposer and said second interposer therein.

12. (Original) A connector assembly as recited in claim 6 further comprising a retainer body positioned adjacent to the first carrier board and said second carrier board, said retainer including a first snap engaging said first substrate and a second snap feature engaging said second substrate to retain said retainer body between said first carrier board and said second carrier board.

13. (Original) A connector assembly as recited in claim 12 further comprising a fastener coupling said retainer to said housing.

14. (Original) A connector assembly as recited in claim 6 wherein said first carrier board, said second carrier board, said third carrier board, and said fourth carrier board comprise alignment slots, said housing having alignment guides positioned on a lateral side, said alignment guides sized to be received within said alignment guides.

15. (Original) A connector assembly as recited in claim 1 wherein said guide channel comprises a snap and said guide arms comprise a snap opening sized to receive a connector snap.

16. (Original) A connector assembly as recited in claim 1 wherein said back shell comprises alignment openings adjacent to said guide arms and wherein said back shell comprises alignment keys, said alignment openings sized to receive said alignment keys.

17. (Currently Amended) A connector assembly for a circuit board comprising:

a first back shell and a second back shell, said first back shell and said second back shell having guide channels and retraction features therein;

a housing having guide arms extending therefrom, said guide arms sized to be receive within said guide channels;

a first carrier board ~~fixedly~~ fixedly coupled to the circuit board, a second carrier board fixedly coupled to the circuit board, ~~said housing fixedly coupled to the first carrier board and the second carrier board so that the housing is indirectly coupled to the circuit board;~~ and

a third carrier board and a fourth carrier board fixedly coupled respectively to said first back shell and said second back shell, so that upon assembly the first carrier board is electrically coupled to the third carrier board and the second carrier board is electrically coupled to the fourth carrier board.

18. (Original) A connector assembly as recited in claim 17 further comprising a first interposer electrically coupling said first carrier board and said third

carrier board, and a second interposer electrically coupling said second carrier board and said fourth carrier board.

19. (Withdrawn) An imaging system comprising:
a detector having a back shell having guide channels therein; and
a data acquisition system comprising:

a circuit board; and

a housing coupled to said circuit board, housing sized to receive said back shell, said housing having guide arms extending therefrom, said guide arms sized to be receive within said guide channel.

20. (Withdrawn) An imaging system as recited in claim 19 wherein said housing is coupled to said circuit board through a retainer that is positioned between a first carrier board fixedly coupled to said circuit board and a second carrier board fixedly coupled to said circuit board.